

BULLETIN

OF THE

BROOKLYN ENTOMOLOGICAL SOCIETY

VOL. XL

APRIL, 1945

No. 2

UNDESCRIBED SPECIES OF TIPULA FROM WESTERN NORTH AMERICA (DIPTERA, TIPULIDAE).

BY CHARLES P. ALEXANDER, Massachusetts State College,
Amherst, Massachusetts.

PART I

In the present report I am describing two species of the genus *Tipula* Linnaeus from the Sierra Nevada, California. Both of these flies belong to the subgenus *Lunatipula* Edwards, now known to be represented by a host of species in the western Nearctic region. The materials here considered were taken by Dr. Otto Degener in the Sequoia National Park, and by Messrs. Thomas H. G. Aitken and Anthony Downes in and near the Yosemite National Park. I am very greatly indebted to the collectors for the privilege of retaining the type material in my very extensive series of Tipulidae.

Tipula (*Lunatipula*) *sequoiarum* n. sp.

Allied to *downesi*; general coloration of thorax gray, patterned with brown; antennae (male) relatively long, scape and pedicel yellow, flagellum black; knobs of halteres brownish black; femora obscure yellow, the tips narrowly and weakly infuscated; wings brownish gray, restrictedly patterned with dark brown and with very conspicuous whitish oblitative areas, including a nearly complete band before cord; male hypopygium with the caudal border of ninth tergite with a broad notch, the lateral angles of the lobes produced into acute spines; inner dististyle profoundly divided, the beak unusually slender; dorsal crest very high; outer basal lobe very large and powerful, appearing as a flattened arm, the apex of which is produced into an inner spine and outer curved spinous blade; eighth sternite produced at apex, the border shallowly

emarginate to produce two strongly divergent lobes, the entire apex fringed with abundant long yellow setae.

Male: Length about 17 mm.; wing 17 mm.; antenna about 5.3 mm.

Frontal prolongation of head above obscure brownish yellow, sparsely pruinose, clearer yellow beneath; nasus short and stout; a concentration of black setae surrounding nasus; palpi with basal segment yellow, second segment infuscated above, more brightened beneath, outer segments black. Antennae with scape and pedicel light yellow; first flagellar segment brown, succeeding ones black; segments rather strongly incised; longest verticils subequal in length to the segments. Head brownish gray, more yellowed in front; a more or less distinct darker median vitta on vertex.

Pronotum obscure yellowish brown, more or less pruinose. Mesothorax of type badly crushed and not fully describable; praescutum gray, more yellowed laterally, the disk patterned with brown; scutum light gray, lobes variegated with darker; scutellum brownish yellow; postnotum dark brownish gray. Pleura variegated obscure yellow and gray. Halteres with stem obscure yellow, narrowly clear yellow basally, knob brownish black. Legs with coxae and trochanters yellow; femora obscure yellow, the tips narrowly and weakly infuscated; tibiae and basitarsi yellowish brown, the outer tarsal segments blackened; claws toothed. Wings with a strong brownish gray tinge, restrictedly variegated by dark brown and with conspicuous whitish oblitative areas; the dark markings include the stigma and restricted seams at origin of *Rs* and along cord; oblitative area before cord very conspicuous, almost reaching the posterior border at end of vein M_4 ; post-stigmal brightening small, involving the bases of cells Sc_2 and R_2 ; prearcular and costal fields more yellowed; veins brown, brighter in the yellowed fields. Squamal setae abundant. Venation: *Rs* about two and one-half times *m-cu*; R_{1+2} entire; petiole of cell M_1 and *m* subequal; *m-cu* at fork of M_{3+4} .

Abdominal tergites obscure yellow, with a broad brown median stripe and much less evident sublateral ones, the latter most distinct on the proximal half of segment; all stripes more or less interrupted by pale caudal borders; sternites chiefly concealed by the overlapping tergites, yellow, the bases of the outer segments infuscated; hypopygium chiefly dark

brown. Male hypopygium with the ninth tergite large, the caudal border with a deep median notch; lateral lobes broad and more sclerotized, their outer angles produced caudad into acute spines; dorso-median area of tergite entirely divided by pale membrane. Ninth sternite with the appendage short-oval, the blunt tip with a dense brush of long crinkly yellow setae. Basistyle entire, not produced. Outer dististyle elongate but very pale and inconspicuous, the longest setae about one-third the length of the style. Inner dististyle profoundly divided; anterior portion slender-stemmed, the outer end much expanded, including a slender reddish beak, a very small, triangular lower beak and an unusually high dorsal crest; on posterior margin of stem with a high narrow crest or flange, its outer edge microscopically crenulate; posterior portion of style, or the outer basal lobe, a very powerful flattened arm that is slightly widened outwardly, the inner apical angle produced into a slender straight spine, the outer apical angle extended into a much longer, curved, yellow spinoid blade; outer margin and apex of the arm with abundant long setae. Eighth sternite much as in *downesi*, sheathing, its apex produced and expanded into two lobes; caudal edge with a very broad V-shaped emargination that is densely fringed with long yellow setae that involve the entire outer margin of the lobes.

Habitat: California (Tulare County).

Holotype: ♂, Sequoia National Park, June 6-8, 1942 (*Degener*).

The most similar described species in *Tipula* (*Lunatipula*) *downesi* Alexander, which, while having the eighth sternite of the male hypopygium somewhat the same as in the present fly, differs very conspicuously in the structure of the tergite and the inner dististyle.

***Tipula* (*Lunatipula*) *miwok* n. sp.**

Allied to *splendens*; size small (wing, male, under 13 mm.); general coloration yellow, the mesothorax dull; antennae with basal three segments yellow, remainder black; legs obscure yellow, the outer tarsal segments blackened; wings weakly tinged with brown, the prearcular and costal fields yellow; stigma brownish yellow; abdomen yellow, tergites two to six, inclusive, each with a large brown lateral spot; male hypopygium with the caudal margin of the ninth tergite irregularly toothed and spined; basistyle not produced into a spine; outer

dististyle very small; inner dististyle with the beak pale, its tip broadly truncated.

Male: Length about 12-13 mm.; wing 11-12.5 mm.; antenna about 3.8-4 mm.

Frontal prolongation of head light yellow; nasus distinct, tufted with yellow setae; palpi with basal three segments yellow, terminal segment blackened. Antennae with scape, pedicel and most of the first flagellar segment yellow, the apex of the latter black; remainder of antennae black; flagellar segments moderately incised, the longest verticils unilaterally distributed, nearly as long as the segments. Head light gray, the anterior portion and the occiput more yellowed; posterior vertex with indications of a slightly darker median vitta.

Prothorax and mesothorax almost uniformly dull yellow, the ground with a very faint grayish bloom, the broad median praescutal stripe glabrous. Pleura with a sparse whitish bloom; dorsopleural membrane yellow. Halteres with stem yellow, knob dark brown. Legs with the coxae and trochanters yellow; remainder of legs obscure yellow, the outer tarsal segments blackened. Wings with a weak brownish tinge, the prearcular and costal fields light yellow; stigma a trifle more brownish yellow; oblitative band at cord poorly defined, indicated chiefly by the bullate nature of the veins, extending from before the stigma into the base of cell M_3 ; the immediate vicinity of the veins slightly more hyaline than the remainder of ground; veins brownish black, yellowed in the brightened fields, tip of vein *Sc* blackened. Venation: *Rs* nearly three times *m-cu*; R_{1+2} entire; *m* and petiole of cell M_1 subequal; cell M_4 not widened at *m-cu*.

Abdomen yellow, the tergites with five brown spots on the sublateral portions of segments two to six, inclusive, on tergite two near midlength of the sclerite, on the others close to the base, the last area small; median region of tergites at base with a less distinct darkened area; posterior borders of tergites pale; sternites and hypopygium yellow. Male hypopygium with the posterior border of ninth tergite irregularly lobed and toothed, including larger conical lateral lobes, each bearing a blackened tooth on face near apex; on either side of midline with a smaller lobe that is covered with microscopic setigerous tubercles and points, the most lateral one being a long slender spine near the base of the lobe; dorsomedian line of tergite with a furrow. Ninth sternite with the appendage

strongly narrowed on its lower portion, the central area pale but setiferous; lower part of appendage with setae of unusual length, nearly as long as the entire lobe, those of the more dilated upper portion shorter. Basistyle not produced into a spine, as in *splendens*, merely with a low fleshy tubercle that is provided with a few long setae. Outer dististyle a tiny pale spatula. Inner dististyle with the beak broadly truncated at apex, not blackened; lower beak terminating some distance from the tip of the former, blackened, narrowly obtuse; dorsal crest low but provided with abundant reddish setae that are directed backward; no developed outer basal lobe. Eighth sternite sheathing, narrowed outwardly, the caudal margin very gently emarginate, without clearly defined lateral lobes, the entire margin fringed with conspicuous reddish yellow setae, those at the outer angles a trifle stouter but not spinoid; on the broad median section the setae form a dense subrectangular patch, the entire setiferous area being set off from the body of the sclerite by whitish membrane.

Habitat: California (Mariposa County).

Holotype: ♂, Yosemite, Mirror Lake, altitude 4000 feet, June 6, 1939 (*Downes*). *Paratopotypes*: 2 ♂♂; *paratypes*, 3 ♂♂, Mormon Bar, June 6, 1939 (*Downes*), June 6, 1940 (*Aitken*).

The name, *mirwok*, is that of an Indian Nation of Penutian linguistic stock occupying the general region of the Yosemite. The fly is most similar to species such as *Tipula* (*Lunatipula*) *lamellata* Doane and *T. (L.) splendens* Doane, differing very conspicuously in the structure of the male hypopygium, especially of the tergite, basistyle and inner dististyle.

Synonymical Note on *Ammoplanopterus* (Hymenoptera, Sphecidae, Pemphredonini).—In 1940 Mochi proposed the genus *Ammoplanopterus* (Bull. Soc. Fouad I^{er} d'Ent., XXIV, p. 27) for a peculiar new species, *A. sinaiticus*, from Palestine. The excellent description and figures of Mochi show without measure of doubt that his *Ammoplanopterus* is synonymous with *Protostigmus*, erected in 1918 by Turner (Ann. & Mag. Nat. Hist. (9), I, p. 356) for the reception of the Algerian form *P. championi*. Mochi's species *sinaiticus* may, however, eventually prove to be discrete from *P. championi*.—V. S. L. PATE, Cornell University, Ithaca, N. Y.